

Page 1 of 7

RECEIVEL

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/489,850

TIME: 09:09:33

DATE: 08/28/2001

Input Set : N:\Crf3\RULE60\09489850.txt
Output Set: N:\CRF3\08282001\1489850.raw

```
SEQUENCE LISTING
      4 (1) GENERAL INFORMATION:
             (i) APPLICANT: VAN ALSTYNE, Diane
     7
                            SHARMA, Lawrence Rajendra
     9
            (ii) TITLE OF INVENTION: PEPTIDES REPRESENTING EPITOPIC SITES FOR
     10
                                      BACTERIAL AND VIRAL MENINGITIS CAUSING AGENTS AND THEIR
     11
                                      CNS CARRIER, ANTIBODIES THERETO, AND USES THEREOF
    13
           (iii) NUMBER OF SEQUENCES: 75
    15
            (iv) CORRESPONDENCE ADDRESS:
                  (A) ADDRESSEE: Foley & Lardner
     16
    17
                  (B) STREET: 3000 K Street, N.W., Suite 500
    18
                  (C) CITY: Washington
     19
                  (D) STATE: D.C.
     20
                  (E) COUNTRY: USA
                  (F) ZIP: 20007-5109
     21
             (V) COMPUTER READABLE FORM:
     23
                  (A) MEDIUM TYPE: Floppy disk
     24
                  (B) COMPUTER: IBM PC compatible
     25
                  (C) OPERATING SYSTEM: PC-DOS/MS-DOS
     26
     27
                  (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
     29
            (vi) CURRENT APPLICATION DATA:
C--> 30
                  (A) APPLICATION NUMBER: US/09/489,850
C--> 31
                  (B) FILING DATE: 24-Jan-2000
                                                                  ENTERED
     32
                  (C) CLASSIFICATION:
     34
           (vii) PRIOR APPLICATION DATA:
                  (A) APPLICATION NUMBER: 08/988,444
     35
                  (B) FILING DATE:
     36
     38
                  (A) APPLICATION NUMBER: US 08/127,499
     39
                  (B) FILING DATE: 28-SEP-1993
     41
          (viii) ATTORNEY/AGENT INFORMATION:
                  (A) NAME: BENT, Stephen A.
     42
     43
                  (B) REGISTRATION NUMBER: 29,768
     44
                  (C) REFERENCE/DOCKET NUMBER: 51916/103/INBI
     46
            (ix) TELECOMMUNICATION INFORMATION:
     47
                  (A) TELEPHONE: (202)672-5300
                  (B) TELEFAX: (202)672-5399
     48
     49
                  (C) TELEX: 904136
     52
        (2) INFORMATION FOR SEQ ID NO: 1:
     54
             (i) SEQUENCE CHARACTERISTICS:
     55
                  (A) LENGTH: 992 amino acids
     56
                  (B) TYPE: amino acid
     57
                  (C) STRANDEDNESS:
     58
                  (D) TOPOLOGY: unknown
     64
            (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
```

Met Ala Ser Thr Thr Pro Ile Thr Met Glu Asp Leu Gln Lys Ala Leu

Glu Ala Gln Ser Arg Ala Leu Arg Ala Gly Leu Ala Ala Gly Ala Ser

10

66

67

69

RAW SEQUENCE LISTING DATE: PATENT APPLICATION: US/09/489,850 TIME: 09

Input Set : N:\Crf3\RULE60\09489850.txt
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70				20					25					30		1
72	Gln	Ser	Ara		Pro	Ara	Pro	Pro		His	Ala	Arσ	Leu		His	т
73	0 ± 1.		35	5		5		40	,			5	45	·		-
75	Pro	Glu		Thr	Pro	Ala	Val		Pro	Glu	Glv	Pro		Pro	Pro	Ara
76		50					55				2	60				2
78	Thr	Gly	Ala	Trp	Gln	Arq	Lys	Asp	Trp	Ser	Arq	Ala	Pro	Pro	Pro	Pro
79	65	•		•		70	-	•	-		75					80
81	Glu	Glu	Arg	Gln	Glu	Ser	Arg	Ser	Gln	Thr	Pro	Ala	Pro	Lys	Pro	Ser
82			-		85		-			90				_	95	
84	Arg	Ala	Pro	Pro	Gln	Gln	Pro	Gln	Pro	Pro	Arg	Met	Gln	Thr	Gly	Arg
85				100					105					110		
87	Gly	Gly	Ser	Ala	Pro	Arg	Pro	Glu	Leu	Gly	Pro	Pro	Thr	Asn	${\tt Pro}$	Phe
88			115					120					125			
90	Gln	Ala	Ala	Val	Ala	Arg	Gly	Leu	Arg	Pro	Pro	Leu	His	Asp	Pro	Asp
91		130					135					140				
93	Thr	Glu	Ala	Pro	Thr	Glu	Ala	Cys	Val	Thr	Ser	Trp	Leu	Trp	Ser	Glu
94	145					150	•				155					160
96	Gly	Glu	Gly	Ala		Phe	Tyr	Arg	Val	Asp	Leu	His	Phe	Ile	Asn	Leu
97	_	_			165					170					175	
	Gly	Thr	Pro			Asp	Glu	Asp		Arg	Trp	Asp	Pro			Met
100		_	_	180		_		_	185	_	•	•	•	190		_
102	Туз	Asn		_	GLY	Pro	Glu			o Ala	HIS	val		-	JAL	а ту
103			195		.		1	200			m		205		- 61.	
105	Asr			о Ата	GIY	ASP		_	i GTZ	y vai	. Tr		_	GTZ	GI	ı Arg
106	m\.	210		C1.			215		- 17-1			220		. M		. 3
108	225	_	Ala	GIU	r GTU	230		e Arg	y va.	r GTŽ	235		Arg	TIL) HIS	240
109 111			λνα	Mot	Dro				, Tai	, Acr			ν mha	- ז ור	Dro	Leu
112	пес	и пес	LALY	Het	245		. Alg	, GI	уще	250		, rol	7 1111	. Alc	25!	
114	Pro	Pro	His	ምክr			Arc	r T1e	- G11			r Ser	• Ala	Arc		Pro
115				260		. 020		,	26			,		270		
117	Trr	Arc	r Ile			Glv	, Ala	Pro			. Phe	e Leu	ı Ala			ı Leu
118			275	_	,	1		280					285	_		
120	Leu	ı Ala	Ala	Val	. Ala	ı Val	. Gly	7 Thi	. Ala	a Arc	r Ala	a Gly	, Lei	ıGlr	n Pro	Arg
121		290					295			-	•	300				,
123	Ala	a Asp	Met	Ala	ı Ala	Pro	Pro	Met	: Pro	o Pro	Glr	n Pro	Pro	Arg	, Ala	a His
124	305	5				310)				315	5				320
126	Gly	/ Glr	His	Туг	Gly	, His	His	His	s His	s Glr	ı Let	ı Pro	Phe	e Let	ı Gly	/ His
127					325	5				330)				335	5
129	Asp	Gly	/ His	His	Gly	g Gly	Thi	: Le	ı Arg	y Val	. Gly	g Glr	n His	s His	arç	J Asn
130				340					345					350		
132	Ala	a Ser	Asp	val	. Let	ı Pro	Gly	His	Tr:	o Leu	ı Glr	ı Gly	, Gl	Tr	Gly	y Cys
133			355					360					365			
135	Туз	: Asr	Leu	Ser	Asp	Trp			ı Gly	y Thi	His	s Val	. Суя	s His	Thi	. Lys
136		370					375		_			380				
138			Asp) Phe	Trp			. Glu	ı His	s Asp			Pro	Pro	o Ala	Thr
139	385		_	_		390			_		395					400
141	Pro	Thr	Ser	Leu			: Ala	ı Ala	a Ası	_		e Ala	a Ala	a Ala		Pro
142					405	5				410)				41	5

RAW SEQUENCE LISTING DATE: 08/28/2001 PATENT APPLICATION: US/09/489,850 TIME: 09:09:33

Input Set : N:\Crf3\RULE60\09489850.txt
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144 145	Ala	Thr	Ala	Pro	Pró	Pro	Cys	His	Ala 425	Gly	Leu	Asn	Asp	Ser 430	Cys	Gly
147	Gly	Phe	Leu		Gly	Cys	Gly	Pro		Arg	Leu	Pro	Thr		Leu	Thr
148	-		435		•	•	_	440		_			445			
150	Pro	Gly	Ala	Val	Gly	Asp	Leu	Arg	Ala	Val	His	His	Arg	Pro	Val	Pro
151	_	450		_			455					460				
153		Tyr	Pro	Val	Cys		Ala	Met	Arg	Trp		Leu	Pro	Pro	Trp	
154	465	**- 7	- 1 -	~	m1	470	•		6 1	_	475	_		_	_	480
156	Leu	vaı	Ile	ьeu		АТА	Arg	Pro	GLU		GTĀ	Trp	Thr	Cys	_	GLY
157 159	Wa I	Dro	Ala	цiс	485 Bro	C1 17	Πh~	λνα	Ctro	490 Bro	C1	T 011	37 - 3	Co**	495	Mo+
160	Val	FIO	AIG	500	110	GIY	1111	AIG	505	FIO	Giu	ьeu	Val	510	PIO	Mec
162	Glv	Arg	Ala		Cvs	Ser	Pro	Ala		Ala	Leu	Trp	Leu		Thr	Ala
163	1	5	515		-1-			520					525			
165	Asn	Ala	Leu	Ser	Leu	Asp	His	Ala	Phe	Ala	Ala	Phe	Val	Leu	Leu	Val
166		530				_	535					540				
168	Pro	Trp	Val	Leu	Ile	Phe	Met	Val	Cys	Arg	Arg	Ala	Cys	Arg	Arg	Pro
169	545					550					555					560
171	Ala	Pro	Pro	Pro		Ser	Pro	Gln	Ser		Cys	Arg	Gly	Thr		Pro
172	_		_	_,	565			_,		570	_	_			575	
174	Pro	Ala	Tyr	_	Glu	GIu	Ala	Phe		Tyr	Leu	Cys	Thr		Pro	GTA
175 177	Cvrc	- ו ג	Пhт	580	mbr	Dro	17 n 1	Dro	585	7 ~~	T 011	7 l a	C1	590	C1	Dho
178	Cys	АТА	Thr 595	GIII	TIIT	PIO	vaı	600	vai	AIG	ьец	АІА	605	vai	GIY	FILE
180	Glu	Ser	Lys	Tle	Val	Asp	Glv		Cvs	Phe	Ala	Pro		Asp	Leu	Glu
181		610	-1-			E	615	1	-1-			620				014
183	Ala	Thr	Gly	Ala	Cys	Ile	Cys	Glu	Ile	Pro	Thr	Asp	Val	Ser	Cys	Glu
184	625					630					635	_				640
186	Gly	Leu	Gly	Ala	Trp	Val	Pro	Thr	Ala	Pro	Cys	Ala	Arg	Ile	Trp	Asn
187					645					650					655	
189	Gly	Thr	Gln		Ala	Cys	Thr	Phe	_	Ala	Val	Asn	Ala		Ser	Ser
190	61. -	61		660	01	.	.	G	665	D 1		D	01	670	G	m
192	GIY	GLY	Tyr	Ата	GIN	ьeu	Ala		Tyr	Pne	Asn	Pro	_	GLY	ser	туr
193 195	Фулъ	Lvc	675 Gln	Фтт	пic	Pro	Thr	680 715	Cvc	C1 v	₩-1	Clu	685 Bro	ת 1 ת	Dho	Clv
196	TYT	690	GIII	1 Y 1	nrs	FIO	695	AIA	Cys	Giu	Val	700	PIO	ALA	FIIC	GLY
198	His		Asp	Ala	Ala	Cvs		Glv	Phe	Pro	Thr		Thr	Val	Met	Ser
199	705					710		1			715	F				720
201	Val	Phe	Ala	Leu	Ala	Ser	Tyr	Val	Gln	His	Pro	His	Lys	Thr	Val	Arg
202					725					730					735	
204	Val	Lys	Phe	His	Thr	Glu	Thr	Arg	Thr	Val	Trp	Gln	Leu	Ser	Val	Ala
205				740					745				•	750		
207	Gly	Val	Ser	Cys	Asn	Val	Thr		Glu	His	Pro	Phe	_	Asn	Thr	Pro
208		~ 3	755	_				760	_	_	_	_	765	_	_	
210	Hls		Gln	Leu	Glu	Val		Val	Pro	Pro	Asp		Gly	Asp	Leu	val
211 213	C1 11	770	T1 ~	Mo+	7 c=	Штт∽	775	C1	7 ~~	را ~	<i>~</i> 1 ~	780	λ ~ ~	Шт	C1	Ten
214	785	TAT	Ile	ne t	ASII	790	THE	GTÅ	MSII	GIII	795	ser	AIG	ттБ	GTÄ	800
214.		Ser	Pro	Asn	Cvs		Glv	Pro	Asn	Ψrn		Ser	Pro	Val	Cvs	
	1				-1 J		1								O1 2	

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Input Set : N:\Crf3\RULE60\09489850.txt
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217						805					810					815	
219		Arσ	His	Ser	Pro		Cvs	Ser	Arσ	T.eu		Glv	Δla	Thr	Pro		Δτα
220		9		001	820		-12	001		825	,	011			830	014	9
222		Pro	Ara	Leu		Leu	Val	Asp	Ala		Asp	Pro	Leu	Leu		Thr	Ala
223			*** 9	835	••••				840				Lou	845	*** 9		
225		Pro	Glv		Glv	Glu	Val	Trp		Thr	Pro	Val	Tle	Gly	Ser	Gln	Ala
226			850		1			855					860	0-1	001	•	
228		Ara		Cvs	Glv	Len	His		Ara	Ala	Glv	Pro		Gly	His	Δla	Thr
229		865		O _I D	0-1		870		**** 9		011	875	-1-	011			880
231			Glu	Met.	Pro	Glu	-	Tle	His	Ala	His		Thr	Ser	Asp	Pro	
232		,				885					890			501		895	
234		His	Pro	Pro	Glv		Leu	Glv	Leu	Lvs		Lvs	Thr	Val	Arσ		Val
235					900			1		905		-1-			910		
237		Ala	Leu	Pro		Ala	Leu	Ala	Pro		Ara	Asn	Val	Arg		Thr	Glv
238				915					920		9		,	925			0_1
240		Cvs	Tvr		Cvs	Glv	Thr	Pro		Leu	Val	Glu	Glv	Leu	Ala	Pro	Glv
241		0,10	930	·	0,0			935			,	014	940				011
243		Glv		Asn	Cvś	His	T.e.11		Val	Δsn	Glv	Glu		Val	Glv	Δla	Phe
244		945	0-1		0,0		950		,		011	955			011		960
246			Pro	Glv	Lvs	Phe		Thr	Δla	Δla	Len		Asn	Thr	Pro	Pro	
247		110	110	017	275	965	· u _				970					975	
249		Ψvr	Gln	va 1	Ser		Glv	Glv	Glu	Ser		Ara	Ala	Ser	Ala		His
250		-1-	01		980	0,0	011	011	0	985		••••		001	990	011	
253	(2)	INFO	ЗМАТ.	TON F		SEO T	TD NO): 2	•	,,,,					,,,,		
255	(2)					_											
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258	•) ST													
259				-			ınkno	own									
265		(xi)	-						EO II	ом с	: 2:						
267												Pro	Pro	Arg	Met	Gln	Thr
268		1		5		5					10			5		15	
270		Glv	Ara	Gly	Glv	Ser											
271		4	,	2	20			•									
273	(2)	INFO	RMAT	ION I		SEO I	ID NO	D: 3	:								
275	\ - <i>\</i>						TERIS										
276		(-/					amino										
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285		(xi)	•	•					EO II	ои с	: 3:						
287		-					Arg		_								
288		1				5	_										
	(2)	INFO	RMAT:	ION E	OR S	SEQ :	ID NO	D: 4	:								
292	• •						reri										
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294				•			o ac										
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296				•			unkno	own.									
			•														

RAW SEQUENCE LISTING DATE: 08/28/2001 PATENT APPLICATION: US/09/489,850 TIME: 09:09:33

Input Set : N:\Crf3\RULE60\09489850.txt
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```
302
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
304
         Glu Arg Gln Glu Ser Arg Ser Gln Thr Pro Ala Pro Lys Pro Ser Arg
305
                                              10
307
         Ala Pro Pro Gln Gln
308
                     20
310 (2) INFORMATION FOR SEQ ID NO: 5:
312
         (i) SEQUENCE CHARACTERISTICS:
313
              (A) LENGTH: 7 amino acids
314
              (B) TYPE: amino acid
315
             (C) STRANDEDNESS:
316
              (D) TOPOLOGY: unknown
322
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
324
         Gln Thr Pro Ala Pro Lys Pro
325
         1
                          5
327 (2) INFORMATION FOR SEQ ID NO: 6:
         (i) SEQUENCE CHARACTERISTICS:
329
330
              (A) LENGTH: 21 amino acids
331
              (B) TYPE: amino acid
332
              (C) STRANDEDNESS:
333
              (D) TOPOLOGY: unknown
339
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
         Asp Met Ala Ala Pro Pro Met Pro Pro Gln Pro Pro Arg Ala His Gly
342
         1
344
         Gln His Tyr Gly His
345
                     20
347 (2) INFORMATION FOR SEQ ID NO: 7:
349
         (i) SEQUENCE CHARACTERISTICS:
350
              (A) LENGTH: 7 amino acids
351
              (B) TYPE: amino acid
352
              (C) STRANDEDNESS:
353
              (D) TOPOLOGY: unknown
359
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
361
         Pro Pro Gln Pro Pro Arg Ala
362
         1
364 (2) INFORMATION FOR SEQ ID NO: 8:
         (i) SEQUENCE CHARACTERISTICS:
367
              (A) LENGTH: 1063 amino acids
              (B) TYPE: amino acid
368
369
              (C) STRANDEDNESS:
370
              (D) TOPOLOGY: unknown
376
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
378
         Met Ala Ser Thr Thr Pro Ile Thr Met Glu Asp Leu Gln Lys Ala Leu
379
                                              10
381
         Glu Ala Gln Ser Arg Ala Leu Arg Ala Glu Leu Ala Ala Gly Ala Ser
382
                                          25
384
         Gln Ser Arg Arg Pro Arg Pro Pro Arg Gln Arg Asp Ser Ser Thr Ser
385
                                      40
                                                           45
387
         Gly Asp Asp Ser Gly Arg Asp Ser Gly Gly Pro Arg Arg Arg Gly
388
                                  55
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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/489,850

DATE: 08/28/2001 TIME: 09:09:34

Input Set : N:\Crf3\RULE60\09489850.txt
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L:30 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]

L:31 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]

L:1170 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 L:1173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 L:1176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 L:1293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23

L:1296 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23